

### **Remarks**

Claims 1-5 and 7-24 were pending in the above-identified application when last examined. Claims 5, 9 and 15 are canceled. Claim 6 is amended to change its dependency from claim 5 to claim 1. Claims 1-4, 6-8, 10-14, and 16-24 are presented for reconsideration and allowance.

### **Claim Rejection under 35 U.S.C. § 102**

Examiner rejected claims 1-4, 7, 10, 13-19, and 21 under 35 U.S.C. 102(b) as being anticipated by Kitajima et al. (US 6,064,358). Applicants respectfully traverse this rejection.

Regarding independent claim 1, Kitajima et al. do not disclose or teach all the elements in claim 1. Kitajima et al. does not teach a common drive circuit connected to a common electrode and operable to generate a common drive signal alternating between a second high voltage and a second low voltage differing in voltage by more than a process-limited maximum. In addition, Kitajima et al. does not teach or suggest pixel drive circuits connected to respective ones of the pixel electrodes and operable to generate respective pixel drive signals alternating between a first high voltage and a first low voltage differing in voltage by less than or equal to a process-limited maximum. No where in Kitajima is it taught or suggested that a process-limited voltage be used with

respect to drive signals. For at least these reasons, Applicants request reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b).

Regarding dependent claim 2, Kitajima et al. do not disclose or teach all the elements in claim 2. Kitajima et al. does not teach a first low voltage and a second low voltage differing in voltage by less than or equal to a threshold voltage at which an electro-optical response is produced by an electro-optical material. Kitajima teaches a difference between two signals ( $V_{DL}-V_{CL}$ ) however Kitajima does not teach or suggest that this difference is related to a threshold voltage at which an electro-optical response is produced by an electro-optical material. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 2 under 35 U.S.C. § 102(b).

Regarding dependent claim 3, Kitajima et al. do not disclose or teach all the elements in claim 3. Kitajima et al. does not teach a first high voltage and a second high voltage differing in voltage by less than or equal to a threshold voltage. Kitajima teaches a difference between two signals ( $V_{DH}-V_{CH}$ ) however Kitajima does not teach or suggest that this difference is related to a threshold voltage. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. § 102(b).

Regarding dependent claim 4, Kitajima et al. do not disclose or teach a common drive signal being substantially periodic between a second low voltage and a second high voltage. The waveforms shown in Figure 26(d) of Kitajima do not appear to be substantially periodic. For at least this reason, Applicants request reconsideration and

withdrawal of the rejection of claim 4 under 35 U.S.C. § 102(b).

Dependent claims 7, 10, and 14 further define patentably distinct claim 1. Therefore, dependent claims 7, 10 and 14 are also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 7, 10, and 14 under 35 U.S.C. § 102(b).

Claim 15 is canceled rendering moot its rejection under 35 U.S.C. 102(b) as being anticipated by Kitajima et al.

As to claims 13 and 16, the Examiner states that Kitajima inherently teaches the process-limited maximum being less than or equal to 1.8 volts which is a breakdown voltage of the pixel drive circuits since the 180 nm transistors included in the pixel drive circuits have a breakdown voltage of 1.8 volts and thus it is required for the device of Kitajima to set the process-limited maximum of the pixel drive signals being less than or equal to 1.8 volts in order to prevent breakdown of the drive circuits. Applicants respectfully disagree.

The breakdown voltage of transistors is a function of more than just the thickness of an insulator. For example, the type of material used to create the insulator is a factor in determining the breakdown voltage. Therefore, the Examiner's argument that an 180 nm transistor must have a 1.8 breakdown voltage is incorrect. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 13 and 16 under 35 U.S.C. § 102(b).

Regarding independent claim 17, Kitajima et al. do not disclose or teach all the

elements in claim 17. Kitajima et al. does not teach driving a common drive electrode with a common drive signal alternating between a second high voltage and a second low voltage differing in voltage by more than the process-limited maximum. In addition, Kitajima et al. does not teach or suggest driving each of the pixel electrodes with a respective pixel drive signal alternating between a first high voltage and a first low voltage differing in voltage by less than or equal to a process-limited maximum. No where in Kitajima is it taught or suggested that a process-limited voltage be used with respect to drive signals. For at least these reasons, Applicants request reconsideration and withdrawal of the rejection of claim 17 under 35 U.S.C. § 102(b).

Regarding dependent claim 18, Kitajima et al. do not disclose or teach all the elements in claim 18. Kitajima et al. does not teach setting a first low voltage and a second low voltage to differ in voltage by less than or equal to a threshold voltage and the first high voltage and the second high voltage to differ in voltage by less than or equal to the threshold voltage. Kitajima teaches a difference between signals ( $V_{DL}-V_{CL}$ ) and ( $V_{DH}-V_{CH}$ ) however Kitajima does not teach or suggest that this difference is related to a threshold voltage at which an electro-optical response is produced by an electro-optical material. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 18 under 35 U.S.C. § 102(b).

Regarding dependent claim 19, Kitajima et al. do not disclose or teach driving a common electrode including generating the common drive signal substantially periodic between the second low voltage and the second high voltage. The waveforms shown in

Figure 26(d) of Kitajima do not appear to be substantially periodic. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 19 under 35 U.S.C. § 102(b).

Dependent claim 21 further defines patentably distinct claim 17. Therefore, dependent claim 21 is also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 21 under 35 U.S.C. § 102(b).

### **Claim Rejection under 35 U.S.C. § 103**

Examiner rejected claims 5 and 9 under 35 U.S.C. 103(a) as being unpatentable over Kitajima in view of Applicants' Admitted Prior Art (herein after "AAPA"). Claims 5 and 9 are canceled rendering moot their rejection.

Examiner rejected claims 8, 11, 20, and 22 under U.S.C. 103(a) as being unpatentable over Kitajima. Applicants respectfully traverse this rejection.

Dependent claims 8 and 11 further define patentably distinct claim 1. Therefore, dependent claims 8 and 11 are also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims 8 and 11 under 35 U.S.C. § 103(a).

Dependent claims 20 and 22 further define patentably distinct claim 17. Therefore, dependent claims 20 and 22 are also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claims

20 and 22 under 35 U.S.C. § 103(a).

Examiner rejected claims 12, 23, and 24 under U.S.C. 103(a) as being unpatentable over Kitajima in view of Kawaguchi et al. (US 6,677,925). Applicants respectfully traverse this rejection.

Regarding claims 12 and 23, Appellants respectfully assert that the Examiner has failed to establish a *prima facie* case of obviousness because, among other reasons, there is no suggestion or motivation to combine the reference teachings as proposed by the Examiner. In the rejection, the Examiner asserts that all of the elements of applicants' claims can be found in the prior art references. This, however, is **not** the proper test for obviousness.

"It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the elements."

*Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957, 43 USPQ2d 1294, 1297 (Fed. Cir. 1997).

The Examiner has provided no basis for a teaching or suggestion in the prior art for combining elements as proposed in the rejection. The Examiner's argument regarding obviousness is as follows:

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the common drive circuit of Kitajima to use the pixel drive signals to generate the common drive signal by converting the first low voltage and the first high voltage of the pixel drive signals to the second low voltage and the second high voltage of the common drive signal...

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The single sentence above represents the Examiner's only explanation regarding a teaching or suggestion to combine. This sentence, however, is simply an *unsupported statement* made by the Examiner. In order to establish a *prima facie* case, a teaching or suggestion to combine must be found *in the prior art*. See, e.g., *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, *supra*. Such an unsupported statement, however, cannot constitute the evidence required to establish existence of a motivation or suggestion to combine:

Whether the Board relies on an express or an implicit showing [of a motivation, suggestion or teaching to modify the teachings of a reference], it must provide particular findings related thereto.... Broad conclusory statements standing alone are not "evidence".

*In re Kotzab*, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (citing *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999))

Accordingly, the Examiner's statement does not constitute a showing of a teaching or suggestion to combine. At the very least, an Examiner must prove that some motivation or suggestion to combine can be found in knowledge generally available to one of ordinary skill in the art. In the present case, however, the Examiner provides no evidence that the requisite knowledge is generally available but, instead, attempts to rely on his own personal opinion. Such personal opinion does not represent an adequate substitute for evidence.

In short, it appears that the Examiner's proposed combination of Kitajima et al. and Kawaguchi et al. is based solely on hindsight derived from applicants' specification. The use of hindsight in this manner is clearly prohibited by the relevant case law:

Obviousness can not be established by hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). As discussed in *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985), it is the prior art itself, and not the applicant's achievement, that must establish the obviousness of the combination.

*In re Dance*, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998)

Obviousness may not be established using hindsight. See *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 220 USPQ 303, 312-13 (Fed. Cir. 1983).



For at least the above reasons, Applicants request reconsideration and withdrawal of the rejection of claims 12 and 23 under 35 U.S.C. § 103(a).

Examiner rejected claim 24 under U.S.C. 103(a) as being unpatentable over Kitajima in view of Kawaguchi et al. (US 6,677,925). Applicants respectfully traverse this rejection.

Dependent claim 24 further defines patentably distinct claim 17. Therefore, dependent claim 24 is also believed to be allowable. For at least this reason, Applicants request reconsideration and withdrawal of the rejection of claim 24 under 35 U.S.C. § 103(a).

### **Conclusion**

Applicants respectfully submit that Applicant's pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby requested.

Respectfully submitted,

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/John Pessetto/

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